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An Inaugural Dissertation on Cholera Infantum

by

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Pennsylvania.

To John Phillips M.D. of Bristol Pennsylⁿ.
A person eminently distinguished for his extensive acquaintance with the whole circle of medical science, and for his politeness as a gentleman,
This dissertation is inscribed
with sentiments of gratitude and respect, by his friend and pupil.
Edⁿ Swain.

To the Medical Professors
of the University of Pennsylvania

Impressed with all the esteem and respect that a pupil can feel for his teachers conscious of your unremitting zeal to inspire your pupils with a taste for study and observation;

Permit me in leaving the school where I have had the honour to finish my medical education, to return you my warmest acknowledgements for the useful information I have received from your valuable lectures, and believe me sirs, I shall ever bear a lively recollection of the pleasure with which I attended you.

To your reputation as men of science I can add nothing; the high estimation of the University is sufficient to distinguish you as worthy professors, justly meriting honour and respect.

Gentlemen

Your very humble servant

Ed.d Lovain

* Gregory and Black. Comp. View

Introduction

No diseases to which the human species are subject, in the different progressive stages of life, more particularly claim our compassion, and the attention of medical aid than those which are incident to the period of infancy and childhood.

The great irritability of their delicate frames, and particularly the mismanagement of those to whom their immediate care is intrusted, render them the subjects of much pain and misery.

So great is the mortality among children, especially in in large cities, that above one half die within the first four or five years; and one fourth of all the deaths nearly are reported to be from cholera Infantum.

The causes and seats of infantile disorders are various: some of which are more common and distressing than those which affect the alimentary canal, from the regularity of their appearance in most seasons, and from the different forms which they assume, proving very frequently mortal few diseases deserve greater attention.

Cholera Infantum

This is a disease which prevails throughout these United states during the warmer months of summer and begining of autumn, its march is rapid and traces of its severe inflictions, and widely spread desolations are annually apparent.

It makes its appearance sooner or later according to the season and section of country in which it is found with us it seldom shows itself before the middle of June, or the commencement of our summer months occasionally not cleaving its ravages before the cooler days of autumn or the season of frost, it generally assumes a more dangerous aspect, in proportion as the heat of the season increases.

The temperature of the weather has a very considerable effect on this disease, great vicissitudes of heat and cold, sudden and long continued rains after a very dry state of the atmosphere, generally favour the operation of the exciting causes, hence the reason, why in some years it proves so alarming

and distressing, whilst in others, from the mild and more uniform temperature of the atmosphere, it is of comparatively rare occurrence.
This disease may arise at any period of the infantile life, though we find it most generally occurs from the fifth to the twentieth month after birth to the third or fourth year, and is particularly fatal during the second summer.

Cholera Infantum does not appear to be a distinct disease from intermitting, and remitting fever, and cholera morbus in adults, but a variety of the same; this may be inferred from the same causes inducing these several disorders, with this difference only, that the exciting cause, with less force will produce morbid action in children who are predisposed to the disease.

Symptoms. It is sometimes ushered in by a diarrhoea which will continue for several days without

* Underwood on the diseases of children.

any other symptom of indisposition, but more commonly makes its onset in a rapid and sudden manner, the child at once will be seized with a vomiting and purging which continue together, or alternately with each other; the matter evacuated is more or less mixed with bile, its appearance is green or yellow; the stools however vary in their appearance and have been distinguished into: sour, curdled, slimy, clayey, watery, and bloody.

In many instances the stools are large and fœtid but in others they are without smell and consist chiefly of the aliment as taken in without having undergone any material change; (this in adults is called lientery) and in violent cases when the disease has run to a considerable length, some degree of tenesmus will occur.

Worms are often discharged in different stages of this disorder.

The symptoms enumerated are accompanied with a fever which is of remitting kind, and discovers evident exacerbations especially in the evening, and like many other bilious diseases of the season is marked with morning remissions.

The pulse is generally small and quick, though sometimes full and hard, countenance pale, wan and languid, eyes sunk and dull, temperature unequal, the abdomen often swells and is remarkably hot, the child moans and sighs much, enjoys but little sleep, rolling about its head, or constantly putting its hands up to its face denoting a disorder of the brain.

One of the most frequent and distressing symptoms in this formidable complaint is a severe pain or griping in the bowels, this may be known by the child starting, by frequent fits of crying and the forcible contraction of its arms and feet towards the stomach.

The duration of this disease is variouse, depending much on the manner in which it comes on, the habit and changes of weather &c.

If the first attack is with violence and left to nature, all the alarming symptoms suddenly increase till the strength of the patient is rapidly diminished, when a fainting comes on, attended with cold sweats, cold extremities, and subsultus tendinum, which sometimes puts an end to the unhappy sufferer in the term of one day.

A hot and dry, a hot and moist, atmosphere seldom fails to increase all the violence of the disease, whereas a cold day very frequently abates its violence, and disposes it to a favourable termination.

It continues in some instances with but few occasional alterations five a six weeks; and even three a four months, before any considerable change takes

place; when the symptoms grow more numerous and distressing, the body becomes emaciated to such a degree that the bones in some cases almost protrude through the skin; a constant inclination to stool takes place though but little matter can be voided, and that of a watery consistence, or of a green colour.

The eyes become languid, and sink deep within their sockets the features are contracted, livid spots appear a sore mouth hiccough, convulsions and a strongly marked hippocratic countenance generally precede the fatal terminations of this disorder.

Treatment

As this disease like all other bilious disorders of the same season, is attended with an inflammatory diathesis in the begining; the first indications of cure when we are called early, are to remove the exciting cause and lessen the morbid excitement, with these views, the first passages should

be immediately cleared of all offending matter;

second In the commencement of the disease where there is much febrile excitement and especially if the child be of a plethoric habit blood letting may be resorted to, and occasionly repeated with advantage, the insidious indications of the pulse are however not to be forgotten; upon the whole, local by means of leeches, when they can be procured is perhaps preferable in a majority of cases.

The bile and other acria matters are to be evacuated by emetics and cathartics, of the first of these ipecacuanha is decidedly the mildest and best, exhibited early in the disease, the most beneficial results are to be expected from it: when there is much gastric irritation and spontaneous vomiting it is of course inadmissable. These symptoms are in the onset of the disease sometimes so distressing and urgent as to require every resource of our art.

the remedies most usually resorted are as follows viz— lime water and milk, flannels steeped in bitter and aromatic herbs, the spice plaster, the warm bath anodine injections, blisters to the arms legs and region of the stomach, by taking the determination from the alimentary canal, are attended with the most salutary effects.

The bowels should be opened by the use of gentle cathartics; such as castor oil with a little laudanum magnesia, or a solution of epsom salts.

The system being prepared, we give calomel, in it we chiefly confide, as possessing properties eminently adapted to the disease; we do not estimate its effects solely on account of its purgative qualities, its specific action on the glandular, and hepatic system, its power of correcting morbid secretions entitle it to our highest confidence given either alone or in combination with opium or ipecac or

* Ayre on Marasmus.

both in proportion to the nature and urgency of the case it will rarely fail to bring down bilious stools. to a child in its second summer may be given calomel gr. ij. gum opii gr. ⅛ ipecac. gr. ¼ every three or four hours.

A late writer* of considerable repute advises the administration of calomel in minute doses, such as the ⅛ of a grain every half hour and its effects in this way are often exceedingly beneficial.

But when the spontaneous discharges have been considerable from the alimentary canal producing a prostration of strength, feebleness of pulse, and a coldness of the extremities, we may conclude that the disease has already sufficiently (or too much) reduced the system, and that all further evacuations by artificial means, would be highly improper; recourse must here be had to remedies to subdue the diarrhoea, and support the strength of the patient viz. prepared chalk with sugar =

†* Chapman,

laudanum and cinnamon water formed into a julep will be found useful. ℞ Creta. ppt. ℥ij Tr. opii gtt XV. vac. alb ℥j. aq cinnamon ℥iij dose desert spoonful every 3 or 4 hours, the vegetable alkali in the following manner may sometimes be given with a good effect. ℞ val. tart. ℥j Tr. opii gtt XV. vac. alb. ℥j aq. fontana ℥iij dose the same as above;* rhubarb is also usefull here ℞ Rad. Rhei gr. X. Cal. Mag. gr. xj. Tr. Opii gtt XV. ol. anis gtt X. vac alb. ℥j, aq fontan ℥iij. dose the same as above, when the stools are very frequent;† Alum in the dose of one grain or two with the ⅛ or ⅙ of a grain of opium is useful Tr. Kino; infusion of galls; with laudanum. and columbo is useful. the infusion of log-wood in the dose of a desert spoonful as recommended by Dr. Physick may be used with advantage. the infusion of the dewberry made by pouring one pt. of boiling water on one ounce of the bruised root, as recommended by Dr. Chapman in the dose of a desert spoonful pro. se. nata - is an invaluable remedy.

Demulcent and diluting drinks, such as thin barley water, rice gruel, infusion of slippery elm bark &c. are highly usefull given in small quantities at a time and frequently repeated; glysters of mutton broth, or flaxseed tea, or starch dissolved in water with a few drops of laudanum, will often give ease and produce other beneficial effects. the flannel roller so highly recommended by Dr Chapman many years since, is an invaluable remedy in this, as in every other stage of the disorder.

When the violent convulsive action of the stomach and bowels are composed; the strength of the patient must be supported by the use of tonic, and cordial remedies viz. bark a which is far better, and easier to be administered, the sulphate of quinine made into an emulsion; columbo root in tincture a decoction with a little laudanum; port wine, or claret; weak brandy and water &c &c— but let whatever be given be in small quantities and often repeated, otherwise

the stomach will reject it, what appears to be of great importance in this disease (as well as every other) is a proper regulation of diet. this branch of the Materia medica has certainly been much neglected. and how far a particular regimen would go in curing diseases is not known; but I suspect it would go much further than has yet been tried. I believe in this stage of the complaint our dependence may rest much on diet; and particularly if we can with its have recourse to country air, the patient will most frequently rapidly regain strength, with no other remedy.

The diet should be first of a gently stimulating kind: if the child be not weaned the milk of the mother is the best, if it is some of the farinaceous substances may be employed with advantage, such as sago, tapioca, barly water, crackers boiled down to a powder and boiled with milk, or which Dr Chapman says is better, flour boiled in a cloth for two or three hours until it is —

perfectly hard then to be grated in milk.
The diet from animals should be first chicken broth, beef tea, and calfs foot jelly: smoked fish or ham will often be retained when every thing else is rejected. from these we may gradually increase to more nourishing articles of food as meats boiled, and roasted.

Before concluding these observations it may not be altogether inappropriate to say a few words on the prophylactic treatment of Cholera Infantum, for which I acknowledge my self almost entirely indebted to a paper with which Dr Parrish has lately favoured the public.
First. Keep the child cool, and expose him to fresh air, for this purpose he should be carried frequently into the open squares, or beyond the suburbs of the city.
Second. Proper attention to lodging; instead of a feather bed, the child should be placed on a hard mattress or on blankets folded and laid upon the floor, the doors and windows open so that fresh

air may be freely admitted.

Third. Frequent ablutions with cool water, and its free employment as a beverage;

Fourth. The state of the gums, if at all swelled or painful. they should be lanced freely, and the operation should be repeated as often as their inflammatory condition may demand; and in severe cases, much good may be expected from the application of blisters behind the ears, the blistered surface should be maintained for some time by stimulating dressings;

Fifth. Avoid all flatulent, and indigestible food; during the first year the mothers milk is the most appropriate nutriment.

Sixth When the stomach of the infant is very delicate the diet of the mother, should be strictly regulated and in all cases, it would be advisable for her to avoid articles of a flatulent nature;

Seventh The occasional use of nutritious animal juices, the sucking of small pieces of ham or dried beef;

Eigth. Aromatics should be used habitually during the summer, in those cases where there is reason to apprehend the occurrence of cholera;

Ninth. The cold bath daily;

Tenth. The flannel roller next to the skin;

Eleventh. Always let animal food enter into the diet of the child after weaning.-

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